

Attorney Docket: WDUMR-022US  
Application No.: 09/883,123  
Title: PARSING SYSTEM

**AMENDMENTS TO THE CLAIMS:**

1. (Currently amended) A system for parsing unstructured and partially structured name and address data in a selected language and script; said system processing at least portions of said data in an incremental manner (~~comprising~~) including multiple parsing steps, each parsing step performed by consulting an inference engine that utilizes an inference strategy; said system further including comprising:

- a) a knowledge base (~~for use in association with said system,~~) wherein said knowledge base (~~analyzing~~) analyses said data using at least one of a lexico-grammatical, orthographic, semantic and contextual predefined levels of analysis;
- b) said knowledge base using a knowledge representation language which embodies systematic functional linguistic theory wherein said knowledge base can build a ~~enabling the~~ complete representation of all possible forms of said data including a form selected from a plurality of languages and scripts from a plurality of countries;
- c) said knowledge base (~~representation language~~) containing a knowledge representation layer, a knowledge base management layer, a language inference layer and a language programming interface layer, which together ~~enable the building of~~ build a body of executable knowledge about semantic structures and lexico-grammatical patterns in a selected language using said ~~for said name and address data in a selected language;~~
- d) a computer readable medium;
- e) wherein a portion of said knowledge base is stored upon said computer readable medium.

Claims 2-12 (Cancelled)

- 13. (Withdrawn) The method of Claim 13 wherein said step of incrementally refining said elements includes execution of an elaboration operator.
- 14. (Withdrawn) The method of Claim 13 wherein said step of incrementally refining said elements includes execution of an encapsulation operator.
- 15. (Withdrawn) The method of Claim 13 wherein said step of incrementally refining said elements includes execution of an enhancement operator.

Attorney Docket: WDUMR-022US

Application No.: 09/883,123

Title: PARSING SYSTEM

16. (Withdrawn) The method of Claim 13 wherein said step of incrementally refining said elements includes execution of an entailment operator.

17. (Withdrawn) The method of Claim 13 wherein said step of incrementally refining said elements includes execution of an extension operator.

18. (Withdrawn) The method of Claim 13 wherein a best-first searching algorithm is utilized.

19. (Withdrawn) The method of Claim 13 wherein a look-ahead algorithm is utilized.

20. (Cancelled).

21. (Withdrawn) A system for processing an unstructured or partially structured set of data so as to obtain a set of structured data; said system comprising a parser engine in communication with a knowledge database.

22. (Withdrawn) The system of Claim 22 wherein said parser engine is reliant on data in the form of knowledge retained in said knowledge database.

23. (Withdrawn) The system of Claim 22 further including a temporary data store associated with said parser engine.

24. (Withdrawn) The system of Claim 24 further including a data block identifier which provides input to said parser engine.

25. (Withdrawn) The system of Claim 25 wherein said data block identifier breaks said set of unstructured data into a plurality of data blocks for input to said parser engine.

26. (Withdrawn) The system of Claim 26 wherein said parser receives consecutive ones of said data blocks and performs a first association step on said data blocks based on knowledge derived from said knowledge database so as to derive a first postulated categorization of said data blocks and storing said data blocks thereby categorized in said temporary storage means.

27. (Withdrawn) The system of Claim 27 wherein said parser engine performs a confirmation step on said data blocks stored in said temporary storage means so as to either confirm or reject its categorization of said data blocks.

28. (Withdrawn) The system of Claim 22 wherein said knowledge base includes knowledge about the information structures of identifying attribute objects.

Attorney Docket: WDUMR-022US

Application No.: 09/883,123

Title: PARSING SYSTEM

29. (Withdrawn) The system of Claim 22 wherein said knowledge database includes knowledge about an association between patterns and the identifying attribute objects they represent.

30. (Withdrawn) The system of Claim 22 wherein a precedence of alternative solutions has been precompiled in said knowledge database thereby to allow best-first searching to be performed by said parser engine.

31. (Withdrawn) The system of Claim 22 wherein said parser engine utilizes a best-first searching algorithm.

32. (Withdrawn) The system of Claim 22 wherein said parser engine utilizes a look-ahead algorithm.

33. (Withdrawn) The system of Claim 22 wherein said parser engine utilizes an inference strategy.

34. (Previously presented) The system of Claim 1 wherein said data comprises attribute data.

Claims 35-36 (Cancelled).

37. (Withdrawn) The system of Claim 22 wherein said data comprises attribute data.

38. (Withdrawn) The system of Claim 37, wherein said attribute data comprises name and address data.

Claims 39-42 (Cancelled).

43. (New) A system for parsing unstructured and partially structured name and address data in a selected language and script, comprising:

a) a knowledge base analyzing said data using at least one of a lexico-grammatical, orthographic, semantic and contextual predefined levels of analysis;

b) said knowledge base analysis using a knowledge representation language which embodies systematic functional linguistic theory wherein said knowledge base can build a representation of multiple forms of said data including a form selected from a plurality of languages and scripts from a plurality of countries;

c) said knowledge base containing a knowledge representation layer, a knowledge base management layer, a language inference layer and a language programming interface layer, which are used to build a body of executable knowledge about semantic structures and

Attorney Docket: WDUMR-022US  
Application No.: 09/883,123  
Title: PARSING SYSTEM  
lexico-grammatical patterns for said name and address data in a selected language for use by said system;

d) a computer readable medium with at least a portion of said knowledge base stored upon said computer readable medium;

f) a computer to process at least portions of said data in an incremental manner including multiple parsing steps, each parsing step performed by consulting an inference engine that uses an inference strategy to parse unstructured and partially structured name and address data in a selected language and script using said knowledge base.

44. (New) A system for parsing unstructured and partially structured name and address data in a selected language and script, said system processing at least portions of said data in an incremental manner including multiple parsing steps, each parsing step performed by consulting an inference engine that uses an inference strategy; said system further comprising:

a) a knowledge base configured to analyze said data using at least one of a lexico-grammatical, orthographic, semantic and contextual predefined levels of analysis;

b) said knowledge base further configured to analyze said data using a knowledge representation language which embodies systematic functional linguistic theory wherein said knowledge base can create a complete representation of all possible forms of said data including a form selected from a plurality of languages and scripts from a plurality of countries;

c) said knowledge base containing a knowledge representation layer, a knowledge base management layer, a language inference layer and a language programming interface layer used to create a body of executable knowledge about semantic structures and lexico-grammatical patterns for said name and address data in a selected language for use in said system processing;

d) a computer readable medium with a portion of said knowledge base stored upon said computer readable medium.